

1. A network for forming a VPN on a shared network and communicating via the VPN, comprising:

a core network of the VPN formed by a label
5 switching network;
access networks formed by VLANs to access said core
network; and

interface devices provided at edges of the label
switching network for interfacing said label switching
10 network and the VLANs.

2. The network according to claim 1, wherein said interface devices are edge routers provided at edges of an MPLS network serving as said label switching network, said edge routers including:

15 a transmit-side edge router for converting a
packet, which is sent from a VLAN, to an MPLS packet and
transmitting the packet to the MPLS network; and

a receive-side edge router for converting the MPLS packet, which has been received from the MPLS network, to a VLAN packet and directing the VLAN packet to a VLAN that belongs to the same VPN as that of a VLAN on the transmit side.

3. The network according to claim 1, wherein each of
said edge routers has a first table storing
25 correspondence between VLAN identifiers (VIDs) contained
in VLAN packets and VPN labels contained in MPLS
packets;

said transmit-side edge router finds a VPN label,

an MPLS packet generating unit for finding a VPN label corresponding to a VID, which is contained in a packet sent from the VLAN, using the corresponding relationship, generating an MPLS packet that includes this VPN label and sending this MPLS packet to the MPLS network.

a route decision unit for deciding a route which directs an MPLS packet to a receiver-side edge router; and

a forwarding label storage unit for storing

15 forwarding labels, which specify routes decided by said route decision unit, mapped to addresses of receive-side edge routers;

11. The edge router according to claim 10, wherein said
25 MPLS packet generating unit receives from edge routers
which are connected to other VLANs constituting said
VPN, information comprising a combination of addresses
of these edge routers and addresses of VLAN-compatible

devices connected to these edge routers, creates a routing table based upon said received information and finds said receive-side edge router, which corresponds to the destination of the packet, from said routing
5 table.

12. An edge router in a network for forming a VPN on a shared network, forming a core network of the VPN by an MPLS network and forming an access network, which is for accessing the core network, by a VLAN, wherein a
10 receive-side edge router comprises:

a table for storing correspondence between VLAN identifiers (VIDs) and VPN labels serving as VPN identifiers; and

a VLAN packet generating unit for finding a VID
15 corresponding to a VPN label, which is contained in a packet that enters from the MPLS network, using said table, generating a VLAN packet that includes this VID, and sending this VLAN packet to a VLAN.

13. An edge router in a network for forming a VPN on a
20 shared network, forming a core network of the VPN by an MPLS network and forming an access network, which is for accessing the core network, by a VLAN, comprising:

a table for storing correspondence between VLAN identifiers (VIDs) and VPN labels serving as VPN
25 identifiers;

an MPLS packet generating unit for finding a VPN label corresponding to a VID, which is contained in a packet that enters from the VLAN, using said table,

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